



## Northwest Working Lands

Natural resources support the people, communities and economies of Alaska, Idaho, Oregon and Washington. The Northwest is the Nation's top producer of many specialty crops, dairy, and timber and is widely recognized for salmon and shellfish fisheries. Northwest working lands provide natural resources that are essential for Alaskan Natives, indigenous people, Native Americans, and subsistence users, especially those in rural and remote areas. Climate change, increased weather variability, and extreme events are already affecting Northwest natural resources. With proactive management, land managers including farmers, ranchers, and foresters are taking steps to increase the resilience of many natural resources to a changing climate.

## USDA Northwest Climate Hub

The USDA Northwest Climate Hub supports robust and healthy, agricultural production and natural resources. The USDA Northwest Climate Hub is a multi-agency USDA effort, including Agricultural Research Service, Forest Service, and Natural Resources Conservation Service, with staff located in Oregon and Washington. The Climate Hub mission is to develop and deliver science-based, region-specific information and technologies, with USDA agencies and partners, to enable climate-informed decision making, and to provide access to assistance to implement those decisions. The Northwest Climate Hub provides regional assessments, science syntheses, technical support, tool development, as well as outreach and education. Through these efforts, the Northwest Climate Hub helps to provide science-based information to land managers and owners so that they can make climate-informed decisions to maintain resilient working lands.

## Climate Risks in the Northwest

- **Reduced Snowpack:** Winter snowpack is essential for Northwest growers to meet irrigation needs during the growing season and for fish to spawn. Higher temperatures result in earlier snowmelt and more rain rather than snow in the mountains, leaving less water flowing in spring and summer.
- **More Frequent Fires:** Over the last 30 years, area burned by wildfires has increased in the Northwest. In many areas fires are projected to increase even more, impacting communities, reducing timber yields, altering wildlife and fish habitats, increasing the risk of soil erosion, and expanding the range of invasive annual weeds on rangelands.
- **Higher Temperatures and Drought:** Temperature and precipitation changes can produce drought, heat stress in crops, livestock, and forests, as well as increases in some diseases and pests.
- **Permafrost Thaw and Less Sea Ice:** Alaska, particularly the Arctic, is among the fastest-warming regions in the world. Higher temperatures are leading to fewer months with sea ice, earlier snowmelt and permafrost thaw. Permafrost thaw and less sea ice lead to an increase risk of infrastructure damage and erosion.

## Assessments & Synthesis

To provide region-specific science to land managers and owners, the Northwest Climate Hub develops periodic climate change vulnerability assessments. For instance, we worked with partners to develop assessments for National Forests. In addition, we collaborate with technical service providers to coproduce, coordinate, and prioritize research and extension activities to support successful mitigation and adaptation to climate change impacts on working lands.

### Publications

A collection of regional climate vulnerability assessments and adaptation strategies from the Northwest Climate Hub and partners. [🔗](#)

The 4th National Climate Assessment, see Chapter 6: Forests and Chapter 24: Northwest [🔗](#)

Adaptation Partners, a science-management partnership focused on climate change adaptation in the western U.S. [🔗](#)

Great Expectations: Deconstructing the Process Pathways Underlying Beaver-Related Restoration [🔗](#)

## Technical Support & Tool Development

To facilitate decision making, the Northwest Climate Hub delivers science-based tools, information and strategies for agriculture, rangelands, forestry, and land management to respond to a changing climate. We work to improve access to usable regional data and climate change projections in support of risk management and climate adaptation planning. We also provide technical support to supplement USDA agriculture and land management program delivery, especially to underserved and vulnerable communities, Tribes, and individuals.



### Tools

AgBiz Logic [www.agbizlogic.com](http://www.agbizlogic.com) 


Climate Mapper [climatetoolbox.org/tool/climate-mapper](http://climatetoolbox.org/tool/climate-mapper) 

Seedlot Selection Tool [seedlotselectiontool.org/sst/](http://seedlotselectiontool.org/sst/) 

PNW Biochar Atlas [www.pnwbiochar.org](http://www.pnwbiochar.org) 




### Tribal Resources Guide

USDA Programs & Resources to Assist with Adaptation to Climate Change is an online searchable table. 



### Incised Stream Restoration


A storymap highlighting five case studies throughout the western US to explore perceptions and impacts of beaver-analog restoration methods. 

## Outreach & Education

Science-based information exchange is important for land managers and producers to be able to make climate-smart decisions. The Northwest Climate Hub provides outreach and education to support science-based risk management. The Northwest Climate Hub develops education materials for natural and agricultural resource managers on the latest climate science and the effects of climate change on working lands. To help develop these materials, the Northwest Climate Hub engages with partners in interactive ways to help lower the barriers to adaptation, manage risk, and enhance rural productivity.




### Hub Website & Monthly Newsletter

Find current information and resources via our website and monthly newsletter. The Northwest Climate Hub newsletter highlights current drought and climate conditions, funding opportunities, recent science findings, webinars, upcoming events, and other regionally specific information. 




### Webinars

The Northwest Climate Hub co-hosts webinars on current and projected climate conditions, drought status updates, tools, adaptation strategies, and recent research. For example, the Hub co-hosts the Pacific Northwest Drought Early Warning Webinar with the National Integrated Drought Information System and Oregon Climate Change Research Institute. 



### Workshops and Convenings

We support and organize regional workshops and convenings on a variety of topics, including agriculture, soil health, drought, and forestry, to prioritize work related to climate change adaptation, convey adaptation strategies, support peer-to-peer learning, and share resources. 

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